numerous papers. His capacity for dealing in this way with huge masses of figures was amazing. I have often gone with him over the details of daily maps exhibiting the results for Scottish weather at official stations, lighthouses, and private stations to trace some generalization which had been suggested by his work. His program was to correlate these daily maps with the observations at the summit and base of the mountain. The methodical care in ordering the entries, and their arrangement as regards color or design, to bring out any salient features, were thoroughly characteristic of his work.

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In thus taking leave of a kindly master and a valued friend, it is not too much to say that the work of Buchan's life has contributed largely to justify the claim of meteorology to be regarded as a separate scientific subject, entitled to separate academic recognition. The physics of the atmosphere has its geographical aspect, but it is not a branch of geography; it has its mathematical aspect, but it is not a branch of mathematics; it has its experimental aspect, but it is not a branch of experimental physics. The constitutional affection of the throat prevented Buchan from using his natural powers of exposition to their full extent, but may we not hope that the University of Edinburgh will see her way to recognize the devotion of her distinguished alumnus by providing the subject of his devotion with a voice among the sciences which she fosters?

RESOLUTIONS ADOPTED AT THE MILAN CONFERENCE FOR SCIENTIFIC AERONAUTICS.[1]

Translated by Prof. A. LAWRENCE ROTCH.

The following resolutions were adopted by the commission:

1. For the official publication, the observations should be formulated according to the rules adopted and indicated in the report of the president. It is necessary that all the small inversions of temperature should be noted.

2. (*a*) The commission, on the proposition of Mr. Teisserenc de Bort, realizing the great importance of collecting sufficient observations to construct charts of the meteorological elements at various heights under different atmospheric conditions, believes that its efforts should be concentrated upon four groups of ascensions annually, called "grand international ascensions", to distinguish them from the monthly ascensions. These last are optional for stations that do not make aerial soundings their chief work.

(*b*) The quarterly ascensions will be made during three consecutive days, on dates to be fixt hereafter.

(*c*) It is recommended that the trajectories of the sounding balloons shall be determined by sighting, and that the same thing be done for pilot balloons, if no sounding balloons are launched, as will be the case at insular stations; in any case the drift of the clouds must be observed with great care. The new series will commence in March, 1907.[2]

3. It is also desirable, as Mr. Rykatchef suggested, to have at least one temporary station for these international observations in the midst of the great Asiatic anticyclone, especially in winter. If this station can be established, observations in winter should last seven days instead of three—that is to say, two days before and two days after the three normal days.

4. To examine the proposition of Mr. Köppen, the conference appoints a subcommittee composed of Messrs. Berson, Hergesell, Köppen, de Quervain, Rotch, and Teisserenc de Bort, which proposes—

(*a*) To adopt the proposition of Mr. Köppen to publish a compendium of the best methods employed for aerial soundings. This compendium will describe the methods and instruments categorically, in a form analogous to that of a dictionary, and the various institutions conducting aerial soundings will be consulted as regards the final version. The publication will be made with the funds of the international commission applicable to the publication of observations.

(*b*) The same subcommittee examined the question relating to the statistical table of ascensions. The form adopted by the Deutsche Seewarte is recommended for the kites, and the institutions are requested to give annually a similar résumé for the balloons.

5. The commission votes its thanks to Messrs. Teisserenc de Bort and Rotch for their splendid researches in the atmosphere above the Atlantic Ocean, and to the Imperial Minister of Marine for the participation of the German Marine in the exploration of the high atmosphere. It listens with interest to the communications of Messrs. Köppen and Hergesell relating to the results of the cruise of the ship *Planet*, which is to advance further the conquest of these unknown regions, and sends a congratulatory dispatch to the Prince of Monaco for the explorations accomplished by his yacht, the *Princesse Alice*.

6. The commission expresses its thanks to the Spanish Minister of War for allowing the military aeronauts to cooperate in the work of the commission, and particularly for the interesting researches made during the eclipse of the sun on August 30, 1905.

7. The commission recognizes with great pleasure the institution of aerial soundings by the Weather Bureau of the United States at Mount Weather, and hopes that these soundings will be extended to other stations of the service.

8. The conference agrees with Major Moedebeck that it would be useful, both for scientific ascensions and for aeronautics in general, if, on the topographic maps of the States, there should be indicated in red the luminous points which can serve for orientation at night, and also if all lines of dangerous electric wires as well as the places most sheltered from the wind should be marked on the maps.

9. The commission accepts Mr. Assmann's propositions with these slight modifications:

(*a*) The commission shall meet but once in three years unless there be especial reasons for assembling oftener.

(*b*) The meetings will be for the purpose of discussing the organization of the work, the methods and instruments, and scientific communications will be presented only at the end of the meetings if time permits.

10. The proposition of Mr. von Bassus is adopted to add to the form containing the reduction of the ascensions of sounding balloons, another column headed "Wind", and having subheadings for "Direction" and "Velocity". The lines of these columns and also those of the columns "Gradient" and "Ventilation" are to be doubled. The notes at the foot of the second page will indicate that up to 3000 meters the reduction should be made for each 500 meters, and above 3000 meters that it should be for each 1000 meters. All inversions, isothermal strata, and sudden changes of wind and humidity are to be noted.

11. It is desirable that the negotiations be continued, looking to the establishment of a seal of the International Commission for Scientific Aeronautics.[3]

GUILBERT'S RULES FOR WEATHER PREDICTION.

By OLIVER L. FASSIG, Research Director. Dated Mount Weather Observatory, Bluemont, Va., November 2, 1906.

In earlier numbers of the REVIEW (November, 1904, and January, 1905)[1] were published two letters relating to a proposed international competition at Liège, organized by the Belgian Astronomical Society, in order to bring out the present state of the art of predicting the weather. This competition was attended by several experts, some of whom have published their methods in full in accordance with the requirements of the jury of awards. The paper presented by M. Gabriel Guilbert, of Caen, was dated September 28, 1905, and attracted the most attention, as it contained a principle of forecasting that had not been employed or announced before.

The jury, composed of six well-known meteorologists, of whom Mr. A. L. Rotch, of Blue Hill Observatory, was the

[1] See Monthly Weather Review, April, 1907, vol. XXXV, p. 181.

[2] Subsequently postponed until July. – *A. L. R.*

[3] This would insure the instruments entering the different countries without examination by customs officers.—*A. L. R.*

[1] Vol. XXXII, page 523, and vol. XXXIII, page 11.